

Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features, and system-connection considerations, so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability, we have sought to anticipate your needs and desires.

Keep this manual handy for future reference.

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model DP-87 Serial Number _____

Unpacking

Unpack the unit carefully and make sure that all accessories and cables are put aside so they will not be lost. Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.



CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD CORPORATION
SHIONOGI SHIBUYA BUILDING 17-5, 2-CHOME,
SHIBUYA, SHIBUYA-KU, TOKYO, JAPAN

KENWOOD CORP. CERTIFIES THIS EQUIPMENT
CONFORMS TO DHHS REGULATIONS NO. 21 CFR
1040, 10, CHAPTER 1, SUBCHAPTER J.

Location: Back panel

DANGER
INVISIBLE LASER RADIATION WHEN OPEN AND
INTERLOCK FAILED OR DEFEATED. AVOID DIRECT
EXPOSURE TO BEAM.

Location: Inside, near the Laser mechanism.

Accessories

RCA pin plug cord 1
System control cord (Except for some areas.) 1

Contents

Caution: Read the following pages marked in **▲** carefully to keep your safety.

▲ Before applying power	2	Controls and indicators	8
▲ Safety precautions	2	Remote control unit	10
▲ Important safeguards	3	Operating instructions	11
Before operation	5	For servicing	15
Notes on handling compact discs	5	In case of difficulty	16
System connections	6	Specifications	16
System control connections	7		

Before applying power

Important!

U.S.A., Canada, Australia and Europe

Units shipped to the U.S.A. and Canada are designed for operation on 120 V AC only.

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 220V AC only.

These units are not equipped with an AC voltage selector switch and the discussion of such a switch that follows, should be disregarded.

All other countries

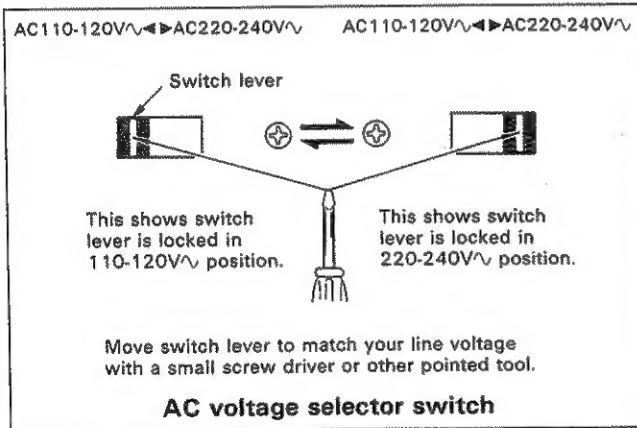
Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

AC voltage selection

These units operates on 110-120 volts or 220-240 volts AC. The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the units was shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.







Safety precautions

Safety precaution for AC plug (For U.S.A. and Canada)

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

WARNING:

TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

 <div data-bbox="330 1617 578 1701"> CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN </div> 	<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>
	<p>THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.</p>
	<p>THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.</p>

Important safeguards

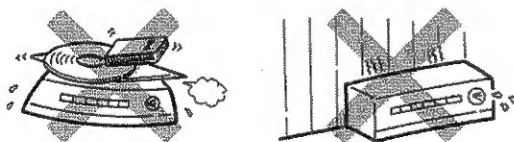
Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

- 1. Power sources** – The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- 2. Power-cord protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

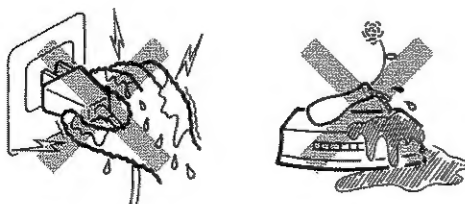
Never pull or stretch the cord.



- 3. Grounding or polarization** – Precautions that should be taken so that the grounding or polarization means of this unit is not defeated.
- 4. Ventilation** – The unit should be situated so that its location or position does not interfere with its proper ventilation. To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls. Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.



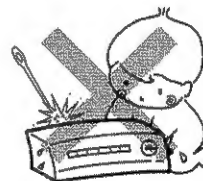
- 5. Water and moisture** – The unit should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.



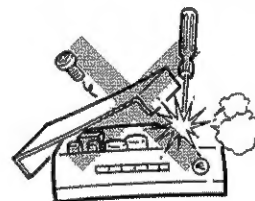
- 6. Temperature** – The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).
- 7. Heat** – The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



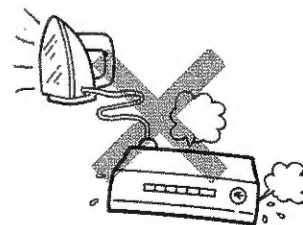
- 8. Electric shock** – Care should be taken so that object do not fall and liquid are not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



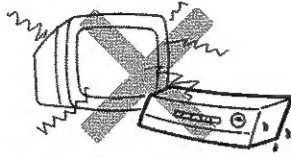
- 9. Enclosure removal** – Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



- 10. AC outlets** – Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



- 11. Magnetic fields** – Keep the units away from a source of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



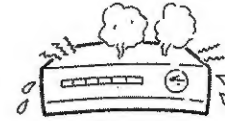
- 12. Cleaning** – Do not use volatile solvents such as alcohol, paint thinner, gasoline, benzine, etc. to clean the cabinet. Use a clean dry cloth.



- 13. Nonuse periods** – The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

- 14. Abnormal smell** – If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service station.

POWER OFF!



- 15. Damage requiring service** – The unit should be serviced by qualified service personnel when:
- A.** The power-supply cord or the plug has been damaged; or
 - B.** Objects have fallen, or liquid has been spilled into the unit; or
 - C.** The unit has been exposed to rain; or
 - D.** The unit does not appear to operate normally or exhibits a marked change in performance; or
 - E.** The unit has been dropped, or the enclosure damaged.
- 16. Servicing** – The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

- 17. Outdoor antenna grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70 – 1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

^a Use No.10 AWG (5.3 mm²) copper, No.8 AWG (8.4 mm²) aluminum, No.17 AWG (1.0 mm²) copper-clad steel or bronze wire, or larger, as a ground wire.

^b Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 – 6 feet (1.22 – 1.83 m) apart.

^c Mount antenna discharge unit as close as possible to where lead-in enters house.

^d Use jumper wire not smaller than No.6 AWG (13.3 mm²) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(f).

- 18. Power lines** – An outdoor antenna should be located away from power lines.

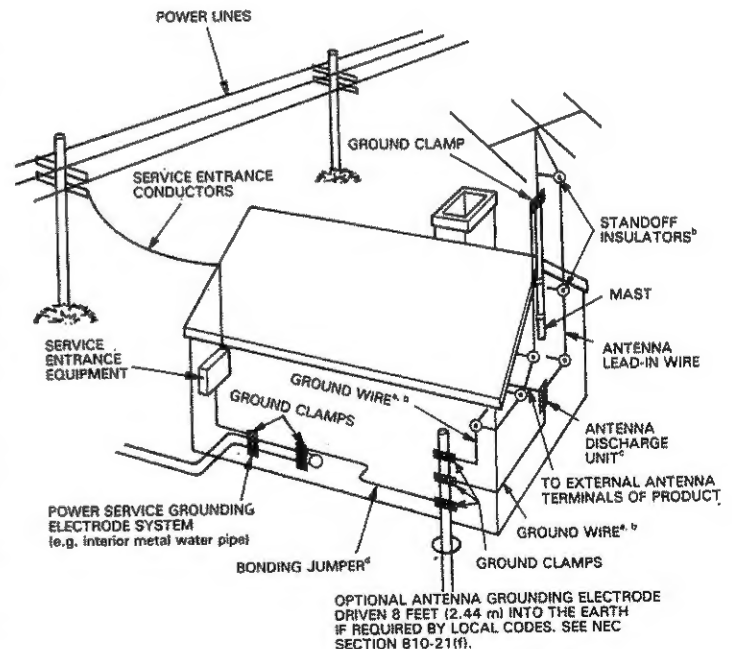


FIGURE
EXAMPLE OF ANTENNA GROUNDING ACCORDING TO
THE NATIONAL ELECTRICAL CODE INSTRUCTIONS
CONTAINED IN ARTICLE 810 – "RADIO AND
TELEVISION EQUIPMENT"

Notes:

1. Item 3 is not required except for grounded or polarized equipment.
2. Item 10 is not required except for units provided with AC outlets.
3. Item 17 and 18 are not required except for units provided with antenna terminals.

Before operation

Beware of condensation

Water vapor in the air may condense on cold parts, forming "dew" on its surface.

For example, when a bottle taken out of the refrigerator and brought into a warm room, dropets of water will form on the bottle surface. This phenomenon is called "condensation". If this occurs of the unit internally, the player may operate incorrectly or may not function at all.

This is not a malfunction, however, the player should be left until it is dry. (Turn the power of this unit ON and leave the player for a while. After several hours, even in the worse case, the player will stabilize and correct playback will be possible). Be especially careful in the following cases:

- When the unit is suddenly brought from a cold place to a warm place (causing rapid temperature change).
- When the temperature of the room is raised suddenly using a heater, etc.
- When the unit is brought from a well-cooled (airconditioned) room to a damp and hot room.
- In conditions where the temperature difference between the surroundings and this unit might cause condensation.

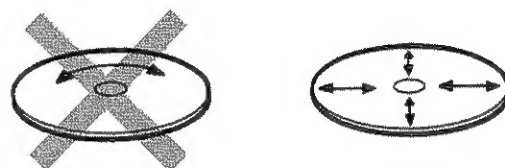
Notes on handling compact discs

Handling

Compact discs are made of plastic (polycarbonate). When the recorded side of the compact disc is dirty or scratched, playback may be noisy or sound may be missed. Even when the label side is scratched, the recording may be damaged. Handle compact discs carefully. Do not stick tape, etc. to compact discs.

Cleaning

When a compact disc is contaminated with fingerprints, etc., wipe with a dry cloth in a radial direction. Never use chemical solvents, such as thinner, benzene, etc. and conventional record cleaners or aerosols.



Storage

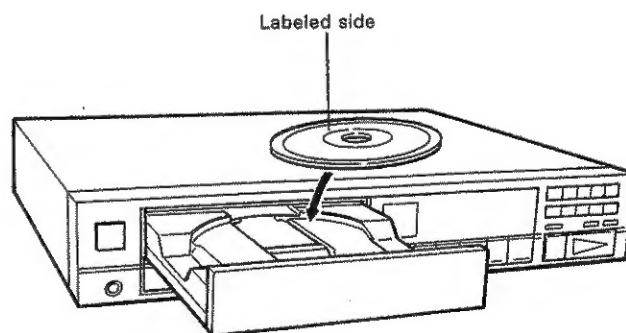
Always replace the compact disc in its case and store it. Compact discs are adversely affected by heat and moisture. Do not store compact discs in a place exposed to direct sunlight or where humidity is high.

How to load a compact disc

Press the OPEN/CLOSE (▲) key to open the tray. The disc is inserted with the labeled side up.

Notes:

1. Make sure of the side of the disc. The disc cannot be played if it is placed upside down.
2. Do not place objects other than disc on the disc tray.

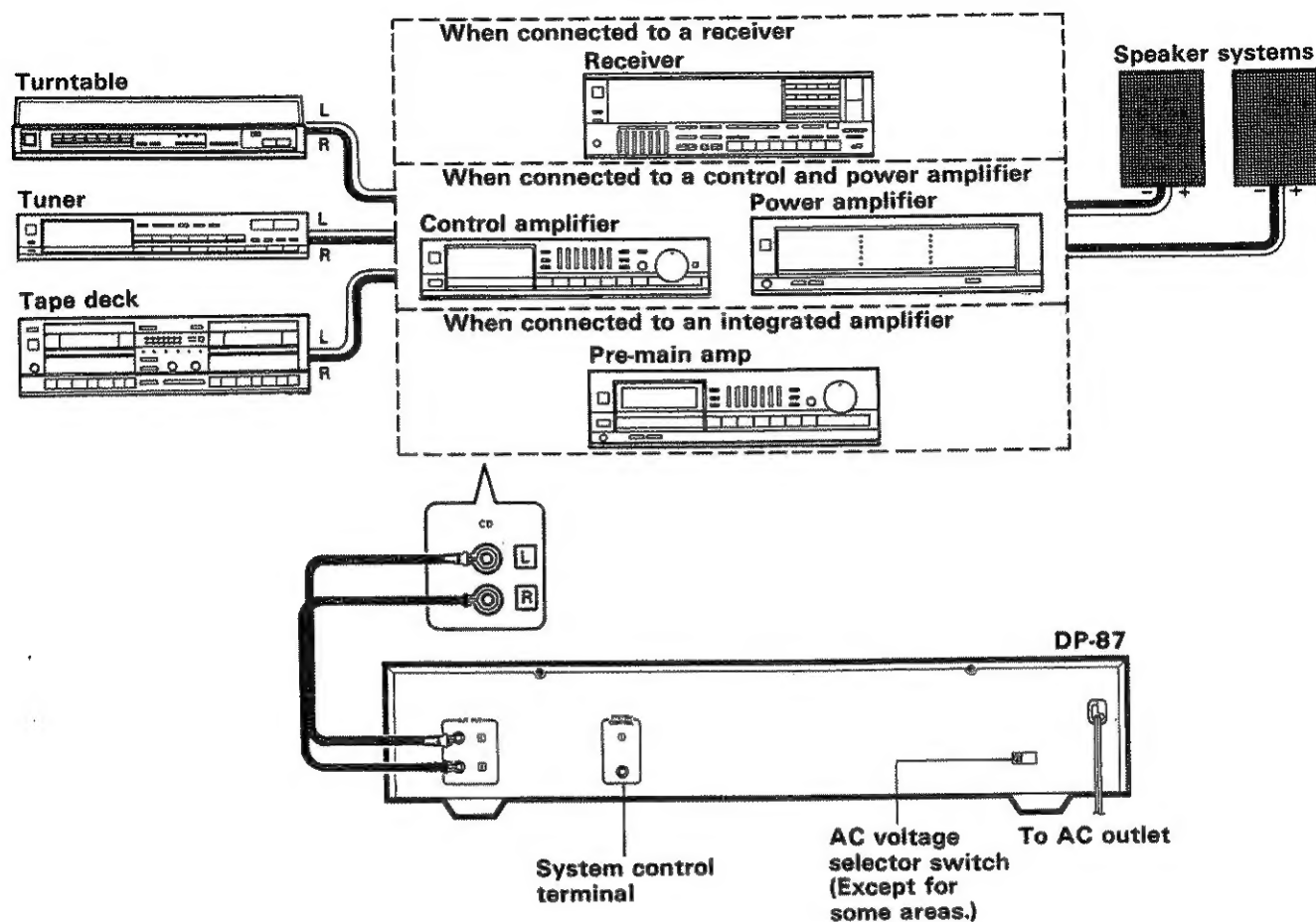


Additional precautions

When performing connections, always disconnect the power cord from the AC outlet. When setting the power switch (POWER) to OFF, always turn the volume control of the amplifier to minimum.

System connections

- Make system connections with the power turned off.



Power cord connection

Connect the power cord to a convenient AC outlet.

Connection to the amplifier

Connect the OUTPUT jacks to the right and left CD or AUX jacks of the amplifier.

Note:

Do not connect the OUTPUT jacks to the PHONO jacks of the amplifier.

Precautions

1. Before connecting or disconnecting any cord, be sure to turn OFF the power switches of the unit and amplifier.
2. Each audio cord must be connected securely to the corresponding terminals (L to L and R to R).

System control connections (Except for some areas.)

Connection

Using the system control cord provided with the KENWOOD system component models, make connection as below.

Operation

1. Automatic play operation

When starting play with the CD player connected to the amplifier or receiver, press the INPUT SELECTOR CD switch on the amplifier or receiver. The CD player will automatically enter the play mode.

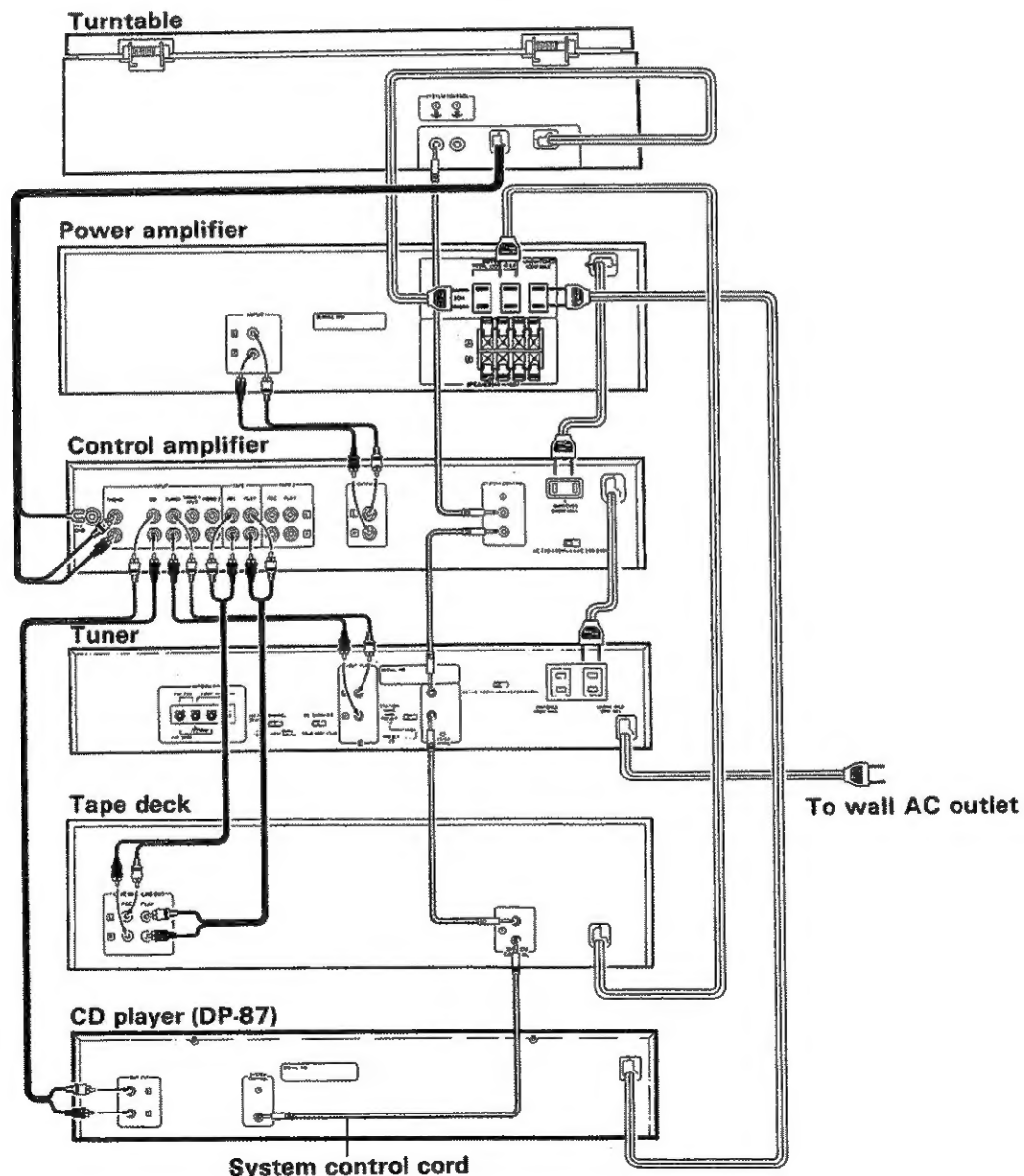
In the same way, pressing the Play key of the CD player will automatically switch the INPUT SELECTOR on the amplifier or receiver to the equipment on which the Play key is pressed.

2. Synchro recording

To record the sound from the CD player onto the tape with the cassette deck, press the PLAY (START) key of the CD player. The cassette deck will start recording automatically, synchronized with the CD player starting play. For more details, refer to the instruction manual of the cassette deck.

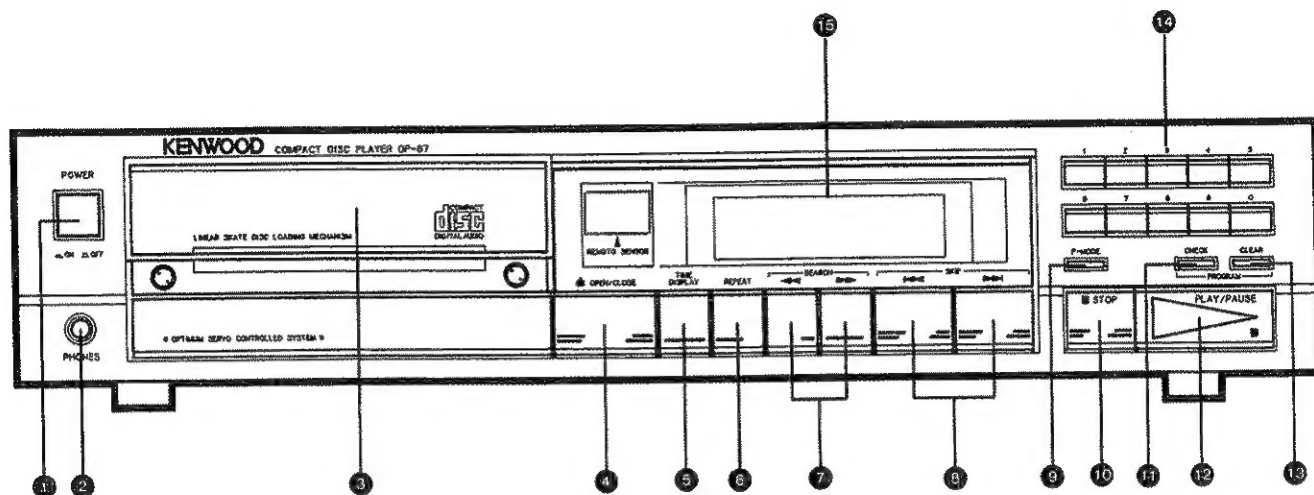
3. Remote control

When the remote control unit provided with the KENWOOD amplifier or receiver, to which the CD player is connected, is equipped with CD player control keys, the CD player can be controlled using these keys.



Controls and indicators

Numbers in circles correspond to the diagram, symbols in brackets correspond to front panel indications.



1 POWER switch

Press to turn the power on. Pressing again turns the power off.

2 PHONES (Headphones) jack

Connect headphones to this jack for private listening.

3 Disc tray

This will be opened or closed by pressing the OPEN/CLOSE (▲) key.

Place a disc on this tray with its label surface up.

4 OPEN/CLOSE key (▲)

Used to open/close the disc tray.

When this key is pressed during play, the disc rotation will stop and the disc tray will be opened.

- When this key is pressed with the tray closed, the tray is opened.

When it is pressed in the middle of tray opening, the tray will be closed.

- After the tray is closed, the disc information (TOC = Table Of Contents) will be read out and then the unit will enter the stop mode automatically.

5 TIME DISPLAY key

Used to select the desired time display.

See page 15.

6 REPEAT key

Press this key to play the disc repeatedly.

The repeat function will be canceled by pressing the REPEAT key again.

7 SEARCH keys (◀◀, ▶▶)

Press to go quickly in the forward or backward direction.

8 SKIP keys (◀◀, ▶▶)

Press to play the next track or the track being played from the beginning.

9 Play mode key (P-MODE)

Press this key to select the mode between Program mode (programmed play) and Track mode (manual play). When the play mode is changed from Program mode to Track mode by pressing this key, all the programmed contents will be erased.

10 STOP key (■)

When this key is pressed during play, the play stops.

11 CHECK key

Used to check the programmed contents.

The TIME DISPLAY key is invalid during program checking.

12 PLAY/PAUSE key (▶/||)

When this key is pressed, the PLAY indicator lights and the play starts. When it is pressed again, the PAUSE indicator lights and the unit enters the pause mode.

When the key is pressed with the tray opened, the tray is closed and then the play starts after the disc information (TOC) is read out. If the tunes are programmed, the programmed play will be started.

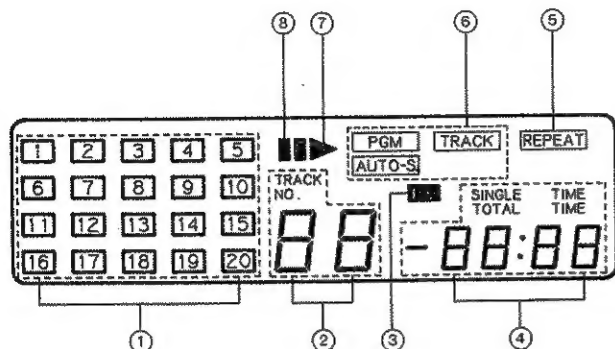
13 CLEAR key

Used to clear the programmed contents.

14 Numeric keys (1~0)

Use these keys to input Track No. for tune selection or memory.

15 Display window



① Music calendar (1~20)

Displays the track numbers contained on the compact disc or the track numbers of the programmed tunes. The Up to 20 tunes on the disc can be displayed.

② Track number display (TRACK NO.)

③ Program check indicator (P.C.)

Lights when checking the programmed contents.

④ Time counter display (SINGLE TIME/TOTAL TIME)

Displays the elapsed time of the tune or the total playing time of the disc or other time information.
For details, refer to page 15.

⑤ REPEAT indicator

⑥ Play mode indicator

Track mode indicator (TRACK)

This indicator lights when the play mode is set to Track mode (manual play).

Program mode indicator (PGM)

This indicator lights when the play mode is set to Program mode (programmed play).

Auto space indicator (AUTO-S.)

This indicator lights when the auto-space function (providing a non-recorded blank of about 4 seconds between tunes) is activated. The Auto Space function is available in Program mode.

⑦ Play indicator (▶)

Lights in the play mode.

⑧ Pause indicator (||)

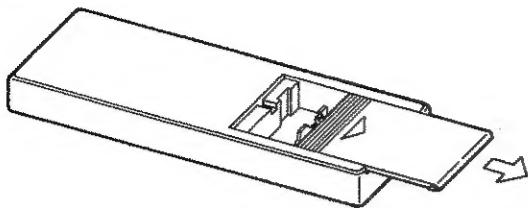
Lights in the pause mode.

Remote control unit

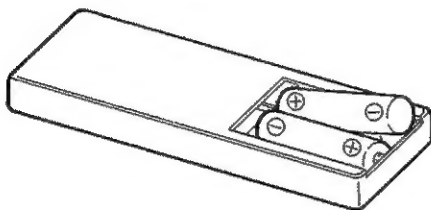
Batteries

Load two "R6", "AA", "SUM-3" type batteries in the remote control unit as shown in the illustration.

1. Remove the cover.



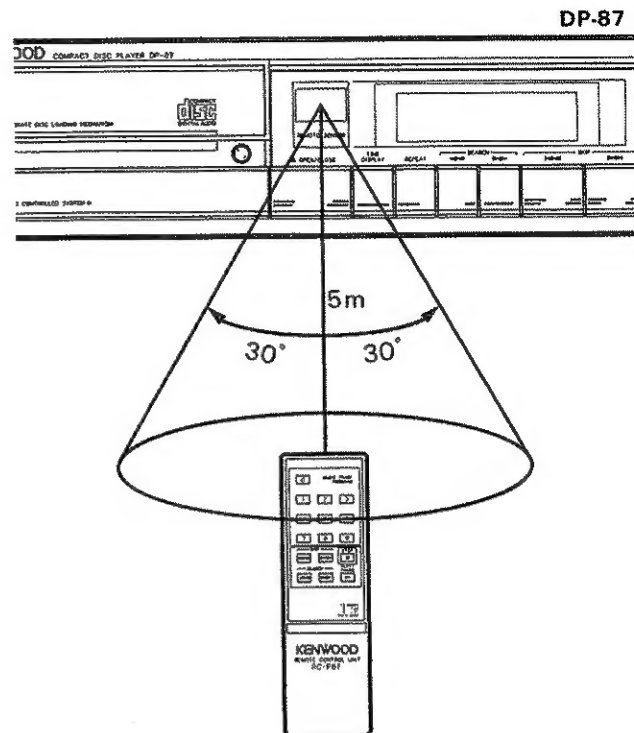
2. Insert batteries with correct polarity, and close the cover.



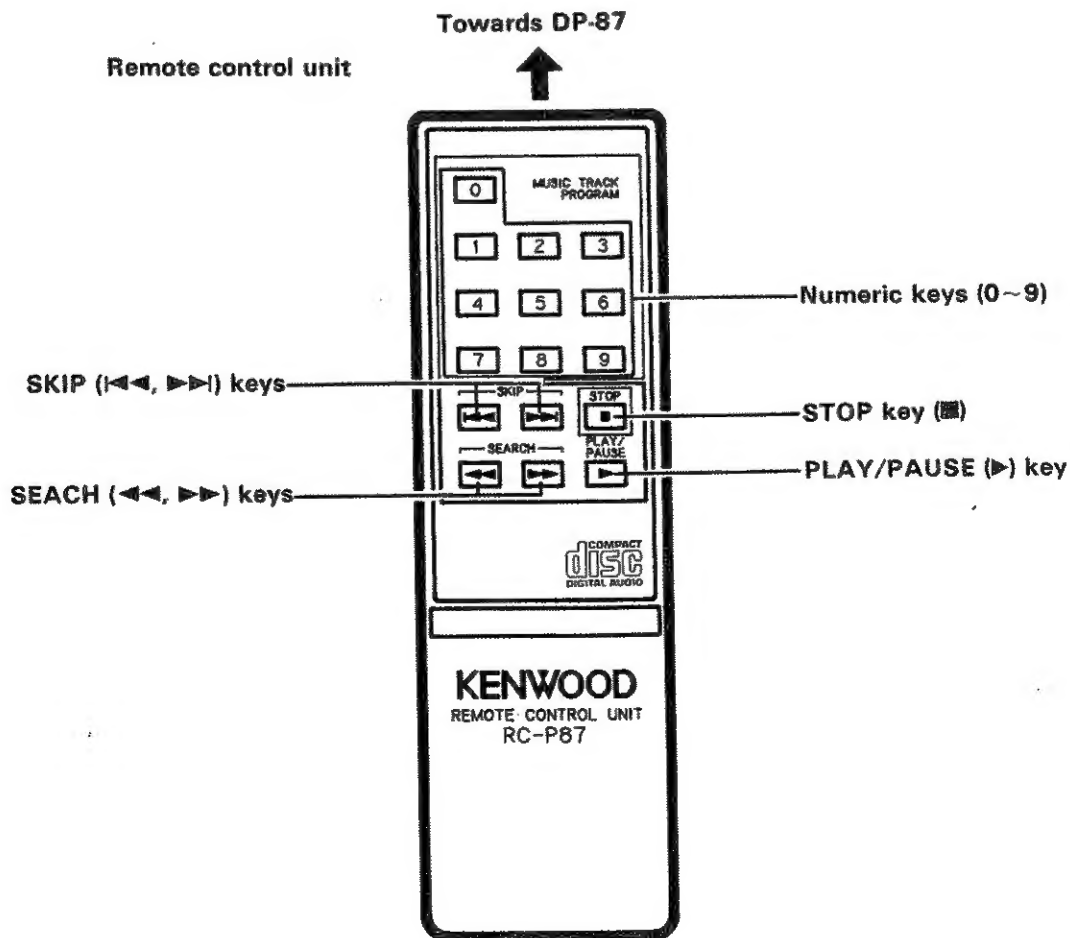
Note:

The provided batteries are to be used for operation of the remote control unit, and it may have shorter life. When the remote control unit becomes effective only for shorter distance or does not operate, replace them with two new batteries.

Operating range of remote control unit



Operating method

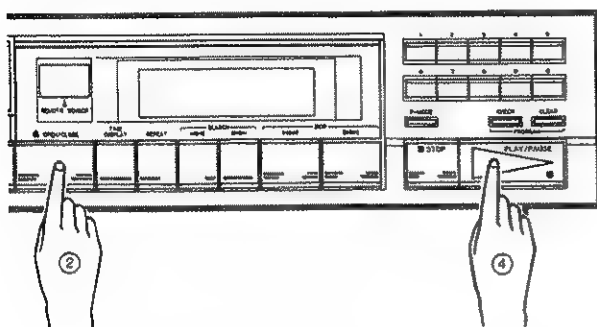


Operating instructions

Manual play

■ To play a disc

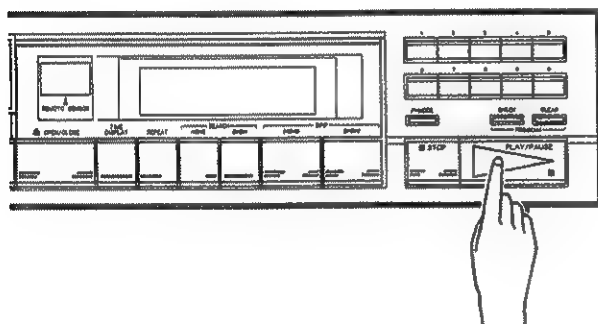
- ① Turn the POWER switch ON.
- ② Press the OPEN/CLOSE (▲) key to open the disc tray.
- ③ Place the disc in the tray with the label facing up.
- ④ Press the PLAY/PAUSE (▶/||) key.
- In a few seconds, the Music Calendar displays the TRACK Nos. (up to 20) recorded on the disc, and the player then ready for play.
- After the final selection has been played, the player will go into the stop mode.



■ To use the pause mode

Press the PLAY/PAUSE (▶/||) key.

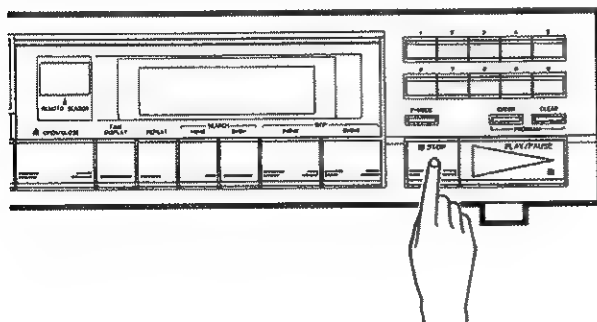
- The PAUSE indicator will light up.
- Press the PLAY/PAUSE (▶/||) key again to restart playing from the point.



■ To stop disc play

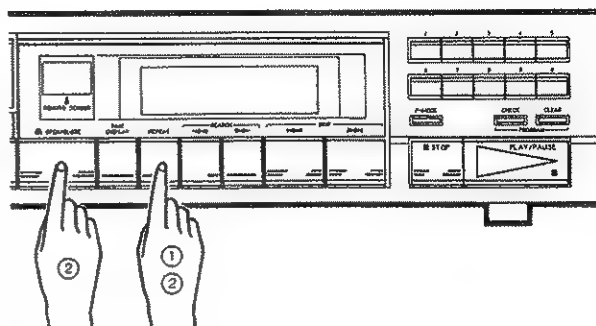
Press the STOP (■) key.

The play indicator (▶) will go out, showing the stop status.



■ Repeat play

- ① Press the REPEAT key. All tunes on the disc can be played repeatedly.
- ② To release repeat play, press the REPEAT key again.
- When the tray is opened by pressing the OPEN/CLOSE (▲) key, the repeat play will also be released.



■ To play a particular track

Operate the numeric keys (1 to 0) or the SKIP (◀◀, ▶▶) keys, and display the desired TRACK No.

- To select the 10th track or higher, first press the Numeric (1 – 9) key once to select the desired ten's digit, then press one of the Numeric (1 to 0) keys to select the desired one's digit.

For example,

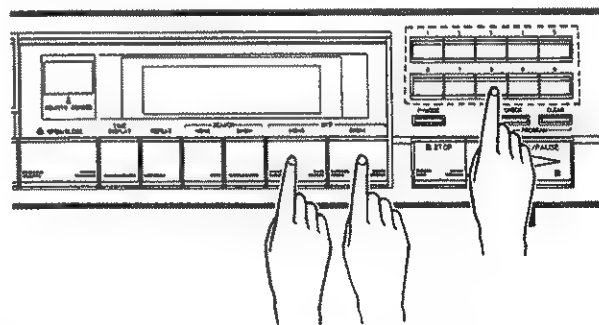
To select TRACK No. 16;

Press 1, then press 6 within 3 seconds.

To select TRACK No. 20;

Press 2, then press 0 within 3 seconds.

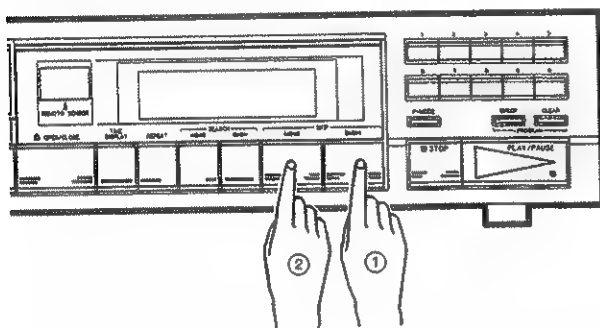
- The selected TRACK No. is displayed, the play indicator lights (▶), and playback starts.
- When the final music track on the disc has been played, the player automatically enters stop mode at the beginning of TRACK No. 1.
- If the selected track No. is higher than the total number of music tracks on the disc, the final music track will be played.



■ To select another selection during play

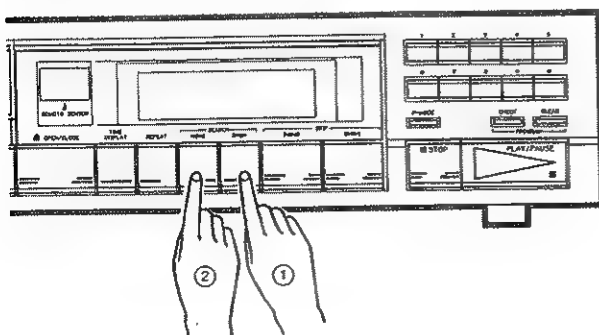
- ① Press the SKIP (▶▶) key. The pickup will search the beginning of the next selection.
- When the SKIP (▶▶) key is pressed for several times, the designated track is searched and play starts from the beginning of that track.
- When it is done during play of the final selection, the pickup will return to the beginning of the first selection.

- ② A press of the SKIP (⏮) key will move the pickup to the beginning of the selection being played.
- When the SKIP (⏮) key is pressed several times, the designated track is searched and play starts from the beginning of that track.
- When the SKIP (⏮) key is pressed twice during the playing of the first track, play starts from the beginning of the last track.
- When the numeric key is pressed, the player will stop playing and move the pickup to the beginning of the selected track.
- When the numeric key is pressed during pause, the pickup will come to the beginning of the selected track while remaining in the pause mode.
- When a TRACK No. is selected using numeric keys or SKIP key with the disc tray open, the tray closes automatically and the play of the selected track starts automatically.



■ To fast forward/fast reverse the tune during play

- ① Press the SEARCH (⏭) key. The player fast forwards the play while the key is pressed.
- ② Press the SEARCH (⏮) key. The player fast reverses the play while the key is pressed.
- When the SEARCH (⏭), (⏮) key is released, normal play resumes at the point where the key is released.
- When the SEARCH (⏭), (⏮) key is pressed during pause mode, the player fast forwards or fast reverses the play and enters the pause mode at the point where the key is released.
- With the REPEAT indicator lit, when the laser pickup exceeds the last tune by pressing the SEARCH (⏭) key, the player returns to the first tune, and when the laser pickup exceeds the first tune by pressing the SEARCH (⏮) key, the player returns to the last tune.

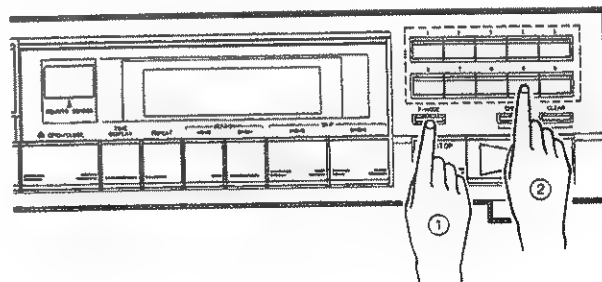


Programmed play

The required tunes on the disc can be programmed up to 20 tunes in any desired order.

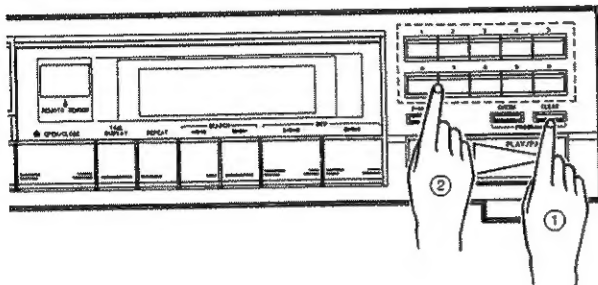
■ To program tunes

- ① Press the play mode key (P-MODE) so that the PGM indicator lights.
- ② Press the desired tune number with the numeric keys. The program number and tune (track) number are displayed in the Display Window to show that the designated tune has been programmed.
- For TRACK No. between 1 and 9, the program is input about 3 seconds after pressing the numeric key, and the music calendar will be displayed in the Display Window. For 10 or larger (2-digit) track No., first press the numeric key for 10's digit (first digit), then within 3 seconds, input the 1's digit (second digit).
- The TRACK No. display shows the first programmed tune and the play indicator (▶) blinks.
- The display is changed several seconds later and the player enters the program-ready mode. (Programming the next is possible before the display is changed.)
- In the same way as ②, up to 20 tunes can be programmed. However, programming the tune number exceeding the last tune on the disc is impossible.
- A program can include music tracks with a track No. of 44 or more, but the total playing time will not be displayed in this case.
- When the play mode key (P-MODE) is pressed in Stop mode, to switch from Track mode to Program mode, the time display automatically changes to the remaining time display for the entire disc.
- When the play mode is changed from the Program mode to the Track mode by pressing the play mode (P-MODE) key, all the programmed contents will be erased.
- When the play mode is changed to the Program mode by pressing the play mode (P-MODE) key during Manual play, the currently playing tune will be automatically programmed as the first program.



■ To change the last program

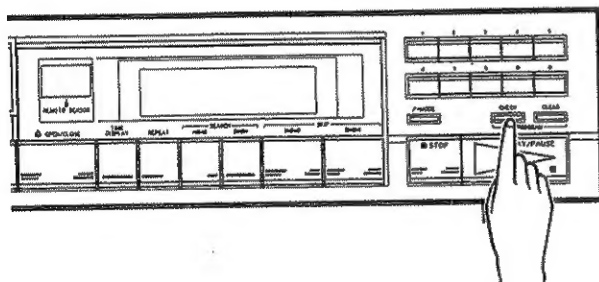
- ① To change the last program, press the CLEAR key. When the CLEAR key is pressed once, the last programmed tune is canceled.
- ② Then press the desired tune number with the numeric keys.
- If the CLEAR key is pressed repeatedly without pressing the numeric keys, programmed tunes will be canceled in the reverse order sequentially from the last program.
- When the programmed tune is being played, it cannot be erased with the CLEAR key.



■ To check the program

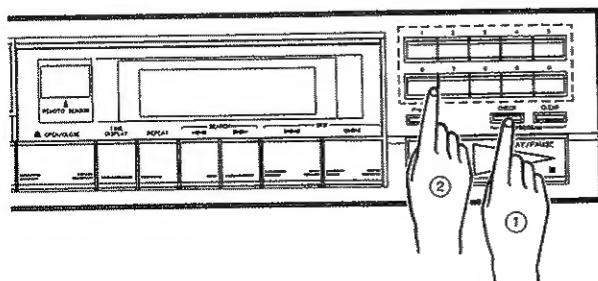
To check the programmed contents, press the CHECK key.

- Each time the CHECK key is pressed, the programmed tune number and program number of that tune are displayed.
- The P.C. indicator lights during program checking.
- Program checking is also possible during play.
- The display shows the program content for about 5 seconds after the CHECK key is pressed, then returns to the time display.



■ To change the program while checking

- ① Press the CHECK key to display the programmed TRACK No. to be changed.
- ② To change the displayed program, first, press the CHECK key to select the music track No. to be changed. Then press the desired tune number with the numeric keys (1~0) while the P.C. indicator is lit. The display shows the newly-selected tune number and program number. (The P.C. indicator disappears in about 5 seconds.)
- When the programmed tune is being played, it cannot be changed.

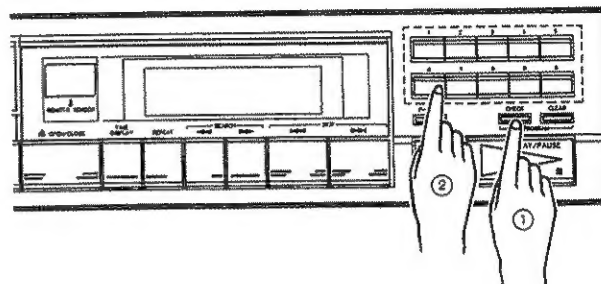


■ To check or change, programmed tracks during playback

- ① Press the CHECK key to display the music track No. to be modified.
- ② To change the music track No. being displayed, select the desired track No. by pressing the numeric keys (1 to 0) within 5 seconds after pressing the CHECK key.

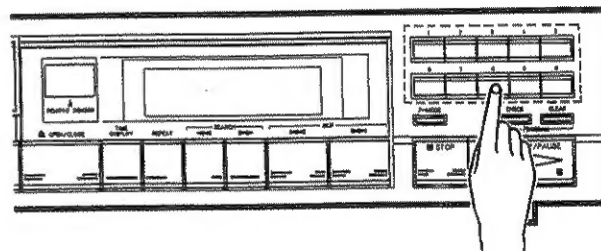
Note:

The programmed music track being played cannot be changed or cleared. In addition, programmed music tracks which have already been played cannot be cleared.



■ To add music tracks to the program being played, press the keys (1 to 0) during program play.

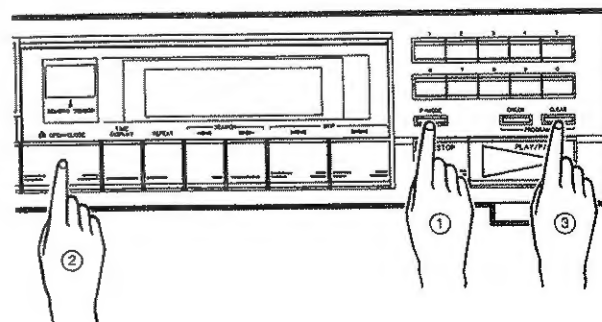
- The track No. of the selected music track will be added after the final music track in the program.



■ To delete the entire program

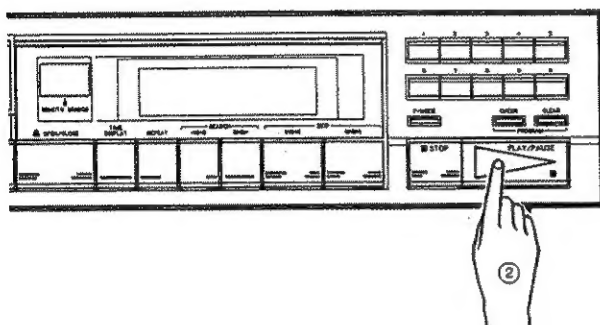
When any of the following operations are performed, the entire program will be deleted.

- ① When the play mode key (P.-MODE) is pressed to enter Track mode.
- ② With the tray closed, press the OPEN/CLOSE (▲) key.
- ③ In the stop mode, press the CLEAR key by the number of programmed tunes.
- ④ Press the POWER switch to turn the power off.



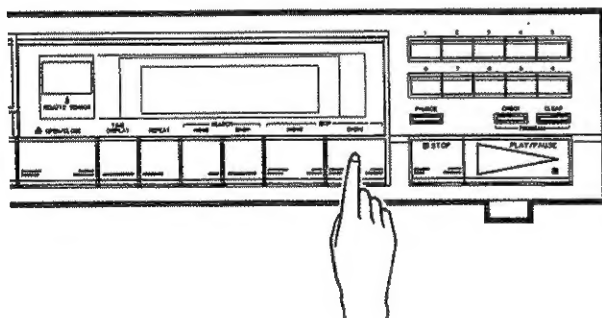
■ To play in the programmed order

- ① To program music tracks, follow the procedure in "To program tunes".
- ② Press the PLAY/PAUSE (▶/||) key. The play indicator (▶) which blinks during programming lights and play starts from the first programmed tune.
- When the play of the last programmed tune is finished, the player enters the stop mode.
- During program play, the auto-space function operates automatically to provide non-recorded blanks of about 4 seconds between tunes.



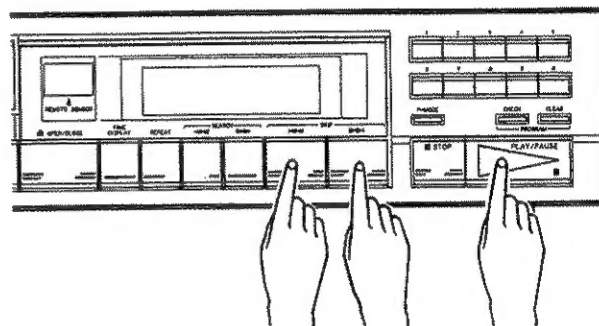
■ To play the next programmed tune

- During program playing, press the SKIP (▶▶) key. When the key is pressed once, the laser pickup skips to the beginning of the next programmed tune. Pressing the key repeatedly or holding the key depressed will skip to the beginning of the tune several programs later.
- If the SKIP (▶▶) key is pressed once in the stop mode, play will start from the 2nd programmed tune.
 - During the play of the last programmed tune, pressing the SKIP (▶▶) key will return to the first programmed tune.



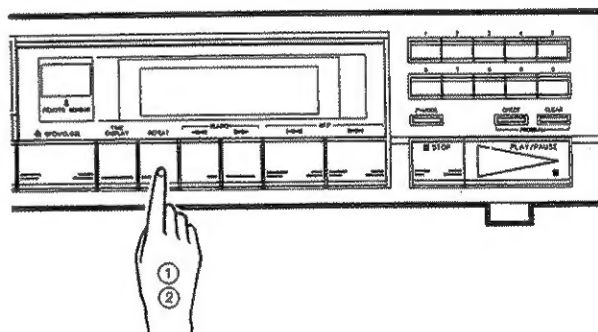
■ To play the previous program

- During program playing, press the SKIP key (◀◀). When the key is pressed once, the laser pickup returns to the beginning of the current tune (program). Pressing repeatedly or holding it depressed will skip to the beginning of the tune several programs before.
- During the play of the first programmed tune, pressing SKIP (◀◀) key twice will skip to the last programmed tune.
 - When the SKIP (◀◀, ▶▶) key is pressed in the pause mode, the player enters the pause mode at the beginning of the selected program. To start play, press the PLAY/PAUSE (▶/||) key.



■ Program repeat operation

- ① Press the REPEAT key.
- The whole tunes will be played repeatedly.
- When the program consists of only one music track, repeated playback of the music track starts.
- ② To release program play, press the REPEAT key again.



Time display

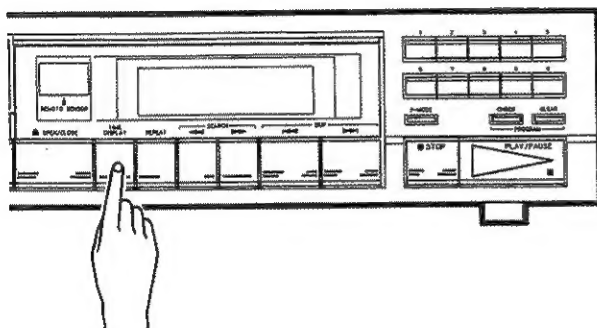
The contents of the time display can be selected between 4 functions.

■ To change the display

Press the TIME DISPLAY key. The contents of the time display will be changed in the following order. The time in the brackets [] is shown in the Program mode.

1. Elapsed time of the current tune (Fig. 1)
2. Remaining time of the current tune (Fig. 2)
3. Total elapsed time on the disc
[of the programmed tunes]..... (Fig. 3)
4. Total remaining time on the disc
[of the programmed tunes]..... (Fig. 4)

When the TIME display key is pressed once more, the time display returns to 1.



Example:

SINGLE TIME
0 1:36

Fig. 1

SINGLE TIME
- 02:45

Fig. 2

TOTAL TIME
02:08

Fig. 3

TOTAL TIME
- 62:47

Fig. 4

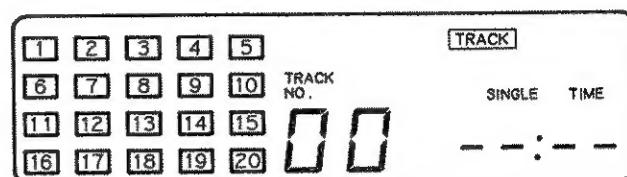
For servicing

Should this unit require servicing, be sure to repack the unit with original carton box and material.

Sending the unit without repacking may result in damaged finish or malfunction.

Before repacking, be sure to secure the laser pick-up system with the transportation screws as follows.

1. Turn the power ON without loading disc.
2. Turn OFF the power after the display shows the following indication.



In case of difficulty

If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Symptom	Possible cause	Remedy
Even when the POWER switch is turned ON the power is not supplied.	The power plug is not properly fitted.	Reconnect the power plug properly into the AC outlet.
When a disc is loaded, it does not start play.	1. Disc is loaded label side upward. 2. Disc is dirty. 3. Optical system collects dew.	1. Reverse the disc. 2. Clean. 3. Keep the unit warm for an hour.
No sound.	Loose connection	Connect the connection cord tightly.
Sound skipped.	1. Disc is very dirty. 2. Disc is greatly damaged. 3. Vibration is transmitted to the unit.	1. Clean. 2. Replace the disc with the new one. 3. Move the unit to a place where no vibration is transmitted to the set.
Selection searching time is extremely long.	Disc is dirty or damaged.	Clean the disc or replace it with the new one.
Tray does not open even after the OPEN/CLOSE (▲) key is pressed.	Improper insertion of a power plug.	Insert the power plug tightly into the AC outlet.

Specifications

Number of channels	2 channels
Frequency response	20 Hz – 20 kHz, ± 1 dB
Dynamic range	More than 92 dB at 1 kHz
Signal to noise ratio	More than 92 dB
Total harmonic distortion	Less than 0.007% at 1 kHz
Channel separation	More than 88 dB at 1 kHz
Wow & flutter	Unmeasurable limit
Line output level/impedance	1.6 V/3.3 kohms
Headphones output level/impedance	31 mW/32 ohms
Playing speed	1.2 – 1.4 m/sec (constant linear velocity)
Quantization	16 bits linear 1 channel
Sampling frequency	44.1 kHz
Power consumptions	15 W
Dimensions	W: 420 mm (16-9/16") H: 90 mm (3-9/16") D: 262 mm (10-5/16")
Weight (Net)	3.8 kg (8.36 lb)

Note:

We follow a policy of advancements in development. For this reason specifications may be changed without notice.